

RESEARCH FUNDING OPPORTUNITIES



April 11, 2007

Presenters: UDOT and FHWA
Research & Development Team

The Transportation Pooled Fund Program



Session #430
Funding Sources for Emergency
Management Training and Education

January 23, 2007
William Zaccagnino, FHWA

Transportation Pooled Fund (TPF) Program

- Enables States to pool funds with each other and/or with the FHWA to address research and technology projects of mutual interest.
- Research, planning, & technology innovation activities are cooperatively sponsored.

Qualifications

- At least one State DOT and one other organization (State, Federal, Academia, etc.)
- Proposed study must be eligible for funding with State, Planning and Research or other selected funds.

Definitions

- Lead Agency – The organization that performs or contracts for the research and performs the administrative functions of the study.
 - State-led: A project administered by a State on behalf of a series of partners.
 - FHWA-led: A project administered by the FHWA on behalf of a series of partners. Typically, the project would be part of the FHWA's national research program.

Definitions

- Lead Agency Contact – The lead agency employee who is primarily responsible for administering the study.
- Funding Commitment – A monetary pledge to support a research project.
- Funding Obligation – The funding amount pledged to a pooled fund project is officially placed in the Fiscal Management Information System.

TPF Solicitation Process

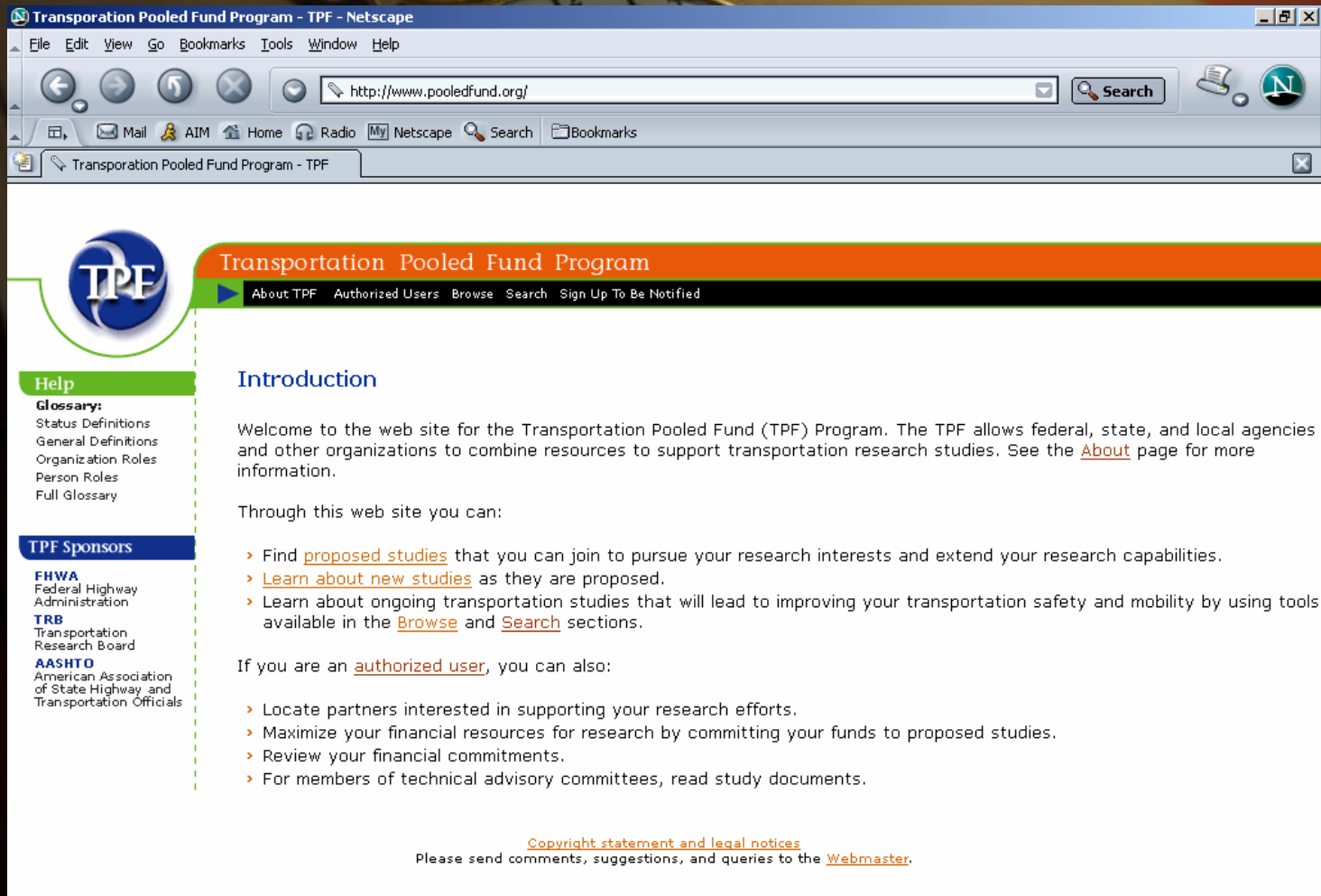
- Develop a Proposal:
 - Identify what you want to study.
 - Your planned approach.
 - The estimated costs.
 - Indicate FHWA's financial contribution to the study.
 - The estimated period of performance.
 - A projected contribution for each participating State.

TPF Solicitation Process

- Solicitation is posted online at the TPF website.
- TPF website will assign solicitation number.

TPF Web Site

http://www.pooledfund.org/



The screenshot shows a Netscape browser window with the title "Transportation Pooled Fund Program - TPF - Netscape". The address bar displays "http://www.pooledfund.org/". The website's header features the TPF logo on the left and a navigation bar with links: "About TPF", "Authorized Users", "Browse", "Search", and "Sign Up To Be Notified".

Help

Glossary:

- Status Definitions
- General Definitions
- Organization Roles
- Person Roles
- Full Glossary

TPF Sponsors

- FHWA**
Federal Highway Administration
- TRB**
Transportation Research Board
- AASHTO**
American Association of State Highway and Transportation Officials

Introduction

Welcome to the web site for the Transportation Pooled Fund (TPF) Program. The TPF allows federal, state, and local agencies and other organizations to combine resources to support transportation research studies. See the [About](#) page for more information.

Through this web site you can:

- > Find [proposed studies](#) that you can join to pursue your research interests and extend your research capabilities.
- > [Learn about new studies](#) as they are proposed.
- > Learn about ongoing transportation studies that will lead to improving your transportation safety and mobility by using tools available in the [Browse](#) and [Search](#) sections.

If you are an [authorized user](#), you can also:

- > Locate partners interested in supporting your research efforts.
- > Maximize your financial resources for research by committing your funds to proposed studies.
- > Review your financial commitments.
- > For members of technical advisory committees, read study documents.

[Copyright statement and legal notices](#)
Please send comments, suggestions, and queries to the [Webmaster](#).

FHWA Review

- SP&R Waiver
- Review proposal (State-led projects)
- Identify FHWA technical contact
- Approve waiver request

Use of 100% SP&R Funds

- Normal Match:
 - 80% Federal Funding
 - 20 % Non-Federal Funding
- FHWA has the authority to approve the use of 100 percent federal funding

Funding Commitments

- All Funding Commitments must be made online: www.pooledfund.org.

Funding Obligations

- FHWA: Funds are obligated to a contract by entering the appropriate accounting information on a procurement request form.
- State: Funding obligations are made in the Fiscal Management Information System.

Funding Obligations

- Non-federal funding may be contributed to a pooled fund project by sending a check to the FHWA Lockbox:

Federal Highway Administration

P.O. Box 404368

Atlanta, GA 30384-4368

Project Initiation

The background of the slide features a stack of books with blue and grey covers. On top of the books is a spiral-bound notebook with a gold-colored cover. Resting on the notebook is a gold-colored pocket watch with a white face and black numerals. The scene is lit with a warm, golden light, creating a professional and scholarly atmosphere.

- Establish Technical Advisory Committee
- Draft Work Statement
- Select Investigator

Technical Advisory Committee

- Each partner may appoint a technical expert to serve on the TAC.
- The TAC will serve for the duration of the project.

TAC Roles and Responsibilities



- Draft and approve the project work statement.
- Select the best qualified researchers to conduct the project.
- Review project progress reports and annual reports.
- Accept project deliverables and final reports
- Complete implementation activities.

Work Statement

- List of partners
- Statement of problem
- Work statement
- Researcher requirements
- Project performance timeline
- Estimated budget
- Project communications requirements
- Deliverables
- Implementation plan

Investigator/Contractor Selection

- The lead agency will use the work statement to initiate the investigator selection process.
- The contracting laws and regulations of the lead agency will drive and govern the actual selection process.
- The TAC member input will be considered to the greatest extent possible in the selection of the successful investigator

A stack of books, with a blue book on top and a brown book below it. A gold-colored pocket watch with a chain is resting on the brown book. The watch face is white with black numbers and hands, showing a time around 10:10. The background is a dark, textured surface.

Project Reporting

- Quarterly—Project progress
- Final—Research results and implementation activities.

For Further Information...

- Log on to TPF web site <http://www.pooledfund.org/>
 - General information about TPF
 - Copy of TPF procedures
 - Lists of active pooled fund projects
 - Interactive features for updating project records
- TPF webmaster,
<http://www.pooledfund.org/webmaster.stm>
- William Zaccagnino, 202-493-3183
- Nazhat Aboobaker, 202-493-3146



Questions???





UTRAC and UTCs Funding



UTRAC Project Funding Status

- 2007 UTRAC Workshop – March 6, 2007
 - 139 Attendees
 - Nine Practice Area Groups
 - Discuss, Evaluate, Edit & Prioritize Problem Statements
 - 78 Problem Statements submitted
 - 41 Problem Statements prioritized by the Groups
 - 20 Problem Statements selected for funding (tentative)

2007 UTRAC Workshop

- Nine Practice Area Groups
 - Construction
 - Maintenance
 - Materials & Pavements
 - Environmental
 - Planning & Asset Management
 - Traffic Management & Safety
 - Geotechnical
 - Structural
 - Hydraulics

Total Research Program

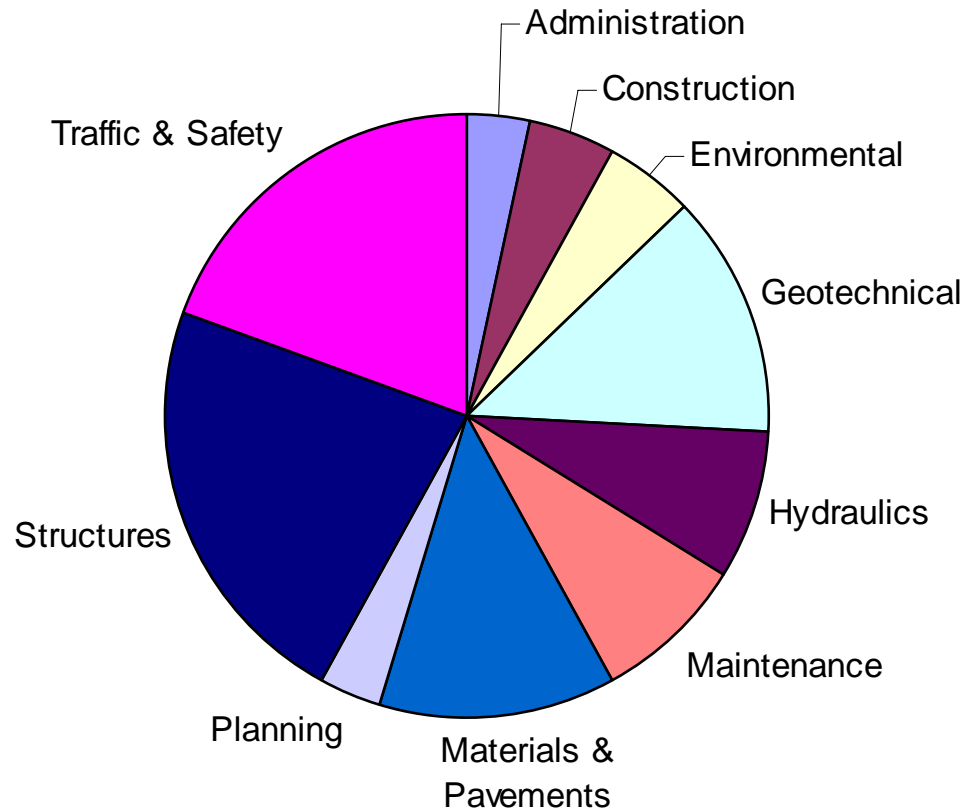
- Research Projects Underway:
 - 62 projects
 - \$ 5,100,350 under contract
 - Total doesn't include:
 - Experimental Features Projects (In House)
 - Pooled Fund Projects (Other States are Lead)
 - NCHRP Program
 - TRB Program
 - TIG Program
 - WASHTO-X Technology Transfer Program

Research Program Balance

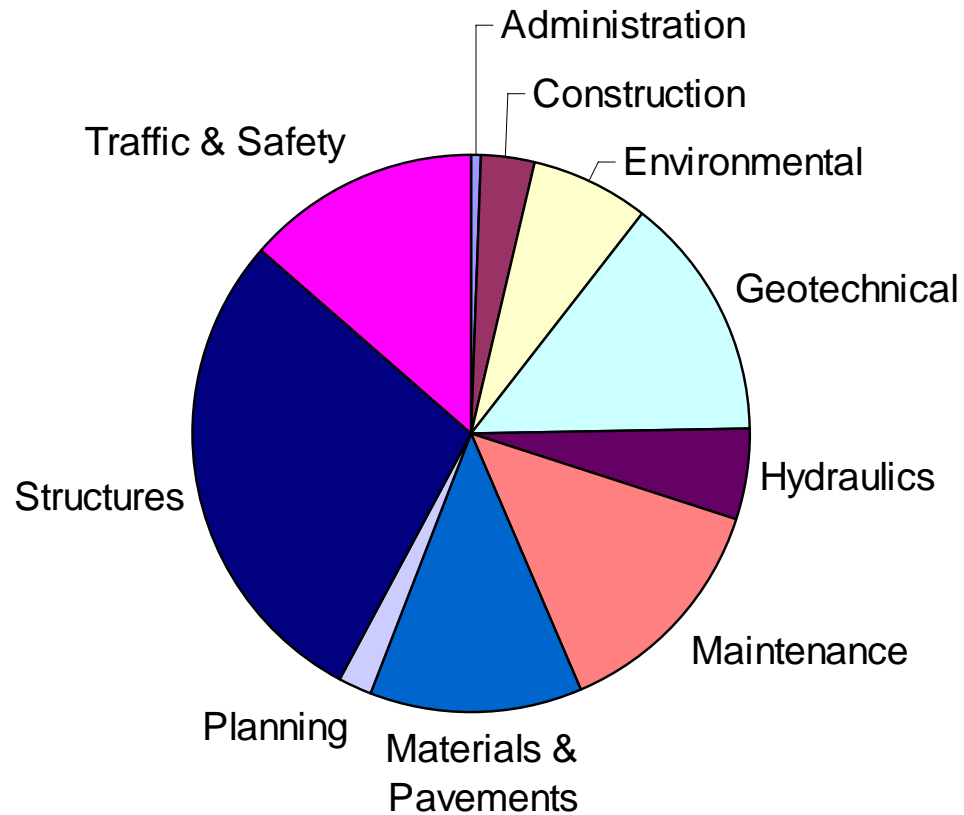
Active Projects (SPR, State, I-15 Testbed, Innovative Bridge)

<u>DISCIPLINE</u>	<u># OF PROJECTS</u>	<u>FUNDING</u>
ADMINISTRATION	2	\$ 24,900
CONSTRUCTION	3	\$ 160,200
ENVIRONMENTAL	3	\$ 350,000
GEOTECHNICAL	8	\$ 720,596
HYDRAULICS	5	\$ 268,276
MAINTENANCE	5	\$ 696,955
MAT'LS & PAVEMENTS	8	\$ 632,309
PLANNING	2	\$ 100,000
STRUCTURES	14	\$ 1,455,071
TRAFFIC & SAFETY	12	\$ 692,043
TOTAL	62	\$ 5,100,350

RESEARCH PROGRAM BALANCE



RESEARCH FUNDING BALANCE



Research Funding Sources

- State Planning & Research (SPR)
- State Research Funds
- Pooled-Fund Projects (join with other states)
- Special Appropriations (I-15 Testbed, etc)
- Special Programs (Innovative Bridge, etc)
- University Transportation Center (USU)
- Mountain Plains Consortium (U of U)

Typical Research Funding Amounts

- Federal SPR: \$1,230,000
- State Funds: \$ 773,000
- Funding for Continuing Projects: \$ 482,000
- Funding for Mandated Programs: \$ 147,000
- Available for New Projects: \$1,374,000
 - Includes overhead costs, Pooled Fund, etc.

Projected FY08 Research Funding

- Available for New Projects: \$1,374,000
- Fund 20 New Projects
 - First and Second Priority Project from Each Group
 - A Few Third Priority Projects and Administrative Selections
 - Leave some funding for Pooled Projects

Project Funding (tentative)

- In-Situ Culvert Rehabilitation / Synthesis Study (UT07.204 - Maintenance)
- Cold Temperatures and Fatigue Quality Control for Asphalt Mixes (UT07.301 - Materials)
- Determining Use of Wildlife Crossing Structures (UT07.401 – Environmental)
- Evaluating Accuracy of Truck Traffic Data (UT07.501 – Planning)

Project Funding (tentative)

- Crashes in the Vicinity of Major Crossroads (UT07.601 – Traffic & Safety)
- Improved Stability and Consolidation Assessment of Embankments (UT07.704 - Geotechnical)
- Accelerated Bridge Construction and Prefabricated Decks (UT07.801 – Structures)

Project Funding (tentative)

- Machine Control Guidance (UT07.107 – Construction)
- Snow Fence Configurations (UT07.210 - Maintenance)
- Occurrence of Water Vapor Flow in Aggregate Base (UT07.305 - Materials)
- Economics and Project Prioritization (UT07.501 – Planning)

Project Funding (tentative)

- Decision Support Tool for Assessing Vulnerability of Transportation Networks (UT07.604 – Traffic & Safety)
- Shaking Table Testing of EQ Drains (UT07.708 - Geotechnical)
- Isolation Bearings (UT07.809 – Structures)
- Retrofitting Culverts and Fish Passage (UT07.905 – Hydraulics)

Project Funding (tentative)

- Design Methodology for Repair of Prestressed Concrete Girder Ends with FRP Composites (UT07.805 - Structures)
- Effect of Variable Speed Systems on Queue Mitigation in Work Zones (UT07.101 - Construction)
- Costs of Winter Maintenance on Asphalt vs. Concrete Pavements (UT07.208 – Maintenance)

Project Funding (tentative)

- Optimization of Mixture Designs using Ternary Blends of Cementitious Materials (UT07.306 – Materials)
- Tire Noise on I-215 East (UT07.402 - Environmental)

Project Funding Process

- Approval of Proposed Funding List by Senior Leaders and FHWA
 - Might result in some changes
- Development of Detailed FY08 Research Work Plan
 - Update on Funding Needs for Continuing Projects
 - Refinement of Budget Numbers

Project Funding Process

- Preparation of Detailed Scopes and Contracts
 - Convene Technical Advisory Committees
 - Selection of Principal Investigators (most are already known)
 - Sign Final Contract
- Receipt of FY08 Funding
 - State Funds: July 1
 - Federal SPR Funds: October 1



Questions about:

UTRAC Process?
Status of Funding List?



University Transportation Centers (UTCs)

- Research Centers Funded by Federal Government (US DOT)
- RITA (Research and Innovative Technology Administration)
- UTC Funding Must Be Matched
- Two UTCs in Utah:
 - Mountain Plains Consortium
 - USU University Transportation Center

University Transportation Centers

- Mountain Plains Consortium
 - Regional UTC / Consortium of 10 Universities
 - Centered at North Dakota State University
 - Theme: Rural and Intermodal Transportation
 - Includes University of Utah Traffic Lab
 - Dr. Peter Martin, Director
 - Typically funds projects related to traffic simulation, modeling, optimization, signal timing, etc.
 - Often provides 1:1 project match

University Transportation Centers

- USU University Transportation Center
 - Tier II UTC: \$500k per year
 - Theme: Innovative Engineering Against Hazards
 - Dr. Kevin Womack, Director
 - Typical Projects include:
 - Structural modeling and design, seismic assessment of bridges, risk assessment of structures and walls, hydraulics of culverts, environmental issues
 - Usually provides 1:1 match



Questions???



Highways for LIFE (HfL)



Longer-lasting highway
infrastructure using Innovations
to accomplish the Fast
construction of Efficient and safe
highways and bridges (**LIFE**)



Six-Year Program

- UDOT Applied for 2006 fund
- Location: 4500 S. over I-215 East side
- \$250,000-\$1,000,000 by rules
- Started in 2005
- \$500,000 will be the average

2006 HfL Status

- 21 projects applied by 17 States
- 5 projects may be selected in 2007
- Currently under review
- We should know by the end of May, 2007.

A pocket watch with a chain is resting on a stack of books. The watch is gold-colored with a white face and black numbers. The books are stacked, with a blue book visible at the bottom. The background is a warm, reddish-brown color.

HfL Process

- HfL office reviews the applications
- Other programs may attach to the successful projects by HfL office
- Congress has the final approval right.



IBRD Fund

Innovative Bridge Research and
Deployment (IBRD)



The background of the slide features a stack of books. The top book is a light-colored, spiral-bound notebook. Resting on the notebook is a small, round, gold-colored pocket watch with a white face and black numerals. The watch's hands indicate a time around 10:10. The scene is lit with a warm, golden light, creating a professional and academic atmosphere.

IBRD Fund

Promote Innovative:

- Design
- Materials
- Construction Method

IBRD Fund

Benefits related to:

- Safety
- Congestion relief

IBRD Fund

Targets to:

- Larger scale project
- Strategic safety and congestion benefits



IBRD Fund

\$100,000 - \$1,000,000

Every state will get some
if applied

A pocket watch with a chain is resting on a stack of books. The watch is gold-colored with a white face and black numbers. The books are stacked, with a blue book on top and a brown book below it. The background is a dark, textured surface.

IBRD Fund

- \$100,000 - \$1,000,000
- Every state will get some if applied



Questions???



A dark, atmospheric scene on a wooden surface. In the upper left, a red candle is lit, casting a warm glow. Behind it are several books. In the lower center, a pocket watch with a chain is visible. The text is overlaid in the center.

National Cooperative Highway Research Program (NCHRP)



NCHRP Overview

- Administered by the Transportation Research Board (TRB)
- Sponsored by the member departments through AASHTO
- Created in 1962
- 5 ½ percent of each state's SPR apportionment

A stack of books is shown, with a gold-colored pocket watch resting on the top book. The watch has a white face with black numbers and hands. The background is a dark, textured surface, possibly a wooden desk. The lighting is warm, creating a soft glow on the books and the watch.

Problem Areas

- Planning
- Design
- Construction
- Operations
- Maintenance

Project & PI Selection Process

- Problem Statements are submitted by AASHTO member transportation departments, the chairs of AASHTO committees and subcommittees, and the Federal Highway Administrator
- Voting by Standing Committee on Research (SCOR) and the Research Advisory Committee (RAC)
- Technical Panels: review the proposals, recommend contract awards, monitor research in progress, provide technical guidance, and review reports for acceptability



Publications & Deliverables

- NCHRP Reports
- NCHRP Syntheses of Highway Practices
- NCHRP Research Results Digests
- NCHRP Legal Research Digests
- NCHRP Web-Only Documents



IDEA Programs

Innovations Deserving
Exploratory Analysis

The background of the slide is a 3D-rendered image of a stack of books. The top book is a thick, tan-colored volume with a gold-colored spiral binding. Resting on its cover is a round, gold-colored pocket watch with a white face and black numerals. The watch's hands indicate a time around 10:10. Below the tan book are two thinner books with blue covers. The entire stack is placed on a dark brown wooden surface with visible grain. The lighting is warm and directional, coming from the upper left, casting soft shadows and highlighting the textures of the books and the watch.

IDEA Programs

- Highways
- Rail
- Safety
- Transit

A spiral-bound notebook with a gold-colored cover and a small analog clock resting on top. The clock has a white face with black numbers and hands. The notebook is open, showing a blank page. The background is a warm, golden-brown color, possibly a wooden surface. The title "IDEA Overview" is written in white, bold, sans-serif font across the top of the notebook.

IDEA Overview

- Extension of the NCHRP
- Private sector can submit problem statements
- Projects are smaller: \$100,000
- Proposals are accepted on March 1st and September 1st



FHWA Technology Transfer Discretionary Funds



- 
- A pocket watch with a gold chain is resting on a stack of books. The top book is yellow, and the one below it is blue. The scene is lit with warm, golden light, creating a sense of time and value.
- Each of the 52 Division offices receive a total of \$10,000 in discretionary funds.



Objective

- To administer research, development, and technology transfer activities in accordance with SAFETEA-LU and remaining ISTEA funds (including former OTA fund)


Other Funding Sources

- Transit Cooperative Research Program
- Airport Cooperative Research Program
- Small Business Innovation Research (SBIR)
- And others

The background of the slide is a dark, atmospheric scene. In the upper left, a stack of books is partially visible, with a small red candle lit in front of them, casting a warm glow. The main surface is a dark wooden table. In the lower center, a round analog clock with a coiled cord is visible. The text is overlaid on this scene.

FHWA Budget Request for FY 2008

**FOR RESEARCH, DEVELOPMENT,
TECHNOLOGY, & EDUCATION
(RDT&E)**

- 
- A pocket watch with a gold-colored chain is resting on a stack of books. The watch face is white with black numbers and hands, showing a time around 10:10. The books are stacked, with a blue book visible on top. The background is a warm, golden-brown color.
- The Federal Highway Administration is requesting \$196.4 million for its program of research, development and deployment in FY 2008.
 - FHWA is also requesting \$26.7 million for education and training related work.

For more information click on the link below:

<http://www.fhwa.dot.gov/budget/fy2008/section5.htm>



Questions???

